

REMARKS

The only substantive change made in the foregoing amendments is the incorporation into claim 1 of the subject matter of claim 2. Claim 2, being redundant, has been cancelled and claims 3 and 4 have been amended accordingly. Claim 8 has been amended for clarification purposes only. This amendment is not intended to limit the scope of said claim in any way.

Claim 9 has been amended in order to obviate its rejection under 35 U.S.C. § 112. In addition, some typographical errors have been corrected.

A typographical error in claim 13 is also being corrected.

Rejection over Bassam U.S. Patent No. 5,849,264

Claims 1-16 have been rejected as anticipated by Bassam U.S. Patent No. 5,849,264.

Claims 1-16 are rejected under 35 U.S.C. § 102(c) as being anticipated by Bassam et al. 5,849,264. The claims of Bassam et al. refer to an insecticidal composition in the form of a water-in-oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of one or more emulsifiers selected from di- and tri-sorbitanesters, polyglycerol esters, etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids, column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water to bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well. The solvents of Bassam et al. are selected from fatty acid and dialkyl phthalates. Hence, as long as applicants cannot clearly and unambiguously demonstrate that such fatty acids and phthalates will not fulfill the conductivity criteria of claim 1, the compositions are deemed to be anticipated by Bassam et al.

This rejection is respectfully traversed, particularly in view of the foregoing amendment which incorporates the subject matter of claim 2 into claim 1.

The compositions disclosed in the Bassam reference are indicated only for the purpose of delivering microencapsulated insecticides. Applicants are concerned with more than simply delivery of aerosol insecticides. Applicants' invention is concerned with improvements in aerosol spray devices useful – as pointed out in paragraph 0003 of

the published application – in a wide variety of products. Applicants have improved the functioning of such products by selecting the non-active components of said products so that, upon discharge from an aerosol spray device, a unipolar electrostatic charge is applied to the composition without the necessity of having to incorporate any special features into the aerosol spraying mechanism.

The compositions claimed in claims 1-16 comprise (a) at least one propellant, (b) at least one non-ionic surfactant, (d) at least one polar, ionic, aromatic or linearly conjugated compound, (e) water and (c) optionally, an oil or a solvent within the oil phase of the emulsion. Applicants' claims include the limitation that the theoretical conductivity of the claimed emulsion must be less than the bulk conductivity, as expressed in claim 1. In claims 2, 3 and 4, the differences between such theoretical conductivity and bulk conductivity are specified in numerical terms.

The insecticidal compositions disclosed in the Bassam reference include substances which fall within the definition of the five components of Applicants' claimed compositions. However, there is no mention in the reference of any conductivity levels. In order to highlight the differences between what Applicants are claiming and what is disclosed in the Bassam reference, Applicants have amended claim 1 to include the limitations of claim 2.

The conductivity difference required in Applicants' claimed compositions is an important feature of Applicants' invention and this feature is not disclosed in the Bassam reference. Therefore, said reference cannot properly function as anticipatory within the meaning of 35 U.S.C. § 102(b).

Rejection over WO 99/21659

Claims 17-24 have been rejected as anticipated by PCT publication No. WO 99/21659 ("Fox").

Claims 17-24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fox et al. WO 99/21659. The claims of Fox et al. describe an aerosol spray device and method of reducing the droplet size of a composition sprayed from such device. The preferred aerosol composition comprises an oil phase, an aqueous phase, a surfactant and a compressed propellant (page 8, lines 4-12). A charge is imparted to the liquid droplets solely by the interaction between the liquid within the aerosol spray device and the spray device itself as the liquid is sprayed therefrom (page 2, line 22-page, line 22).

This rejection is respectfully traversed.

The Examiner correctly states that the claims in Fox describe an aerosol spray device, a method of reducing droplet size of a composition sprayed from the device, and that the preferred aerosol compositions comprise an oil phase, an aqueous phase, a surfactant and a compressed propellant. The Examiner is also correct when he says that a charge is imparted to the liquid droplets solely by the interaction between the liquid and the aerosol spray device as the liquid is sprayed out (emphasis added) The word “solely” highlights an important distinction between Applicants’ claims and the Fox disclosure.

Applicants’ invention involves the careful selection of components in the aerosol composition so that, without requiring any interaction between the liquid composition and the aerosol spray device, the droplets of the liquid are electrostatically charged.

Claims 17-20 and 24 all specify that the droplets are formed from an oil-in-water or a water-in-oil emulsion containing the five components noted above in connection without discussion of the Bassam reference. The Fox reference does not disclose the methods of claims 17-20 or the spray device in claim 24. In these circumstances, Fox cannot properly function as an anticipatory reference.

Claims 21-23 are directed to another aspect of Applicants’ invention. Rather than specifying the ingredients that go into the aerosol composition, these claims require differences in the surface energies (a) between either a Lewis base component of the emulsion and the Lewis base component of the material that the emulsion comes into

contact upon spraying or (b) between a Lewis acid component of the emulsion and the Lewis acid component of the material with which the emulsion comes into contact upon spraying. The formulation of the composition and the formulation of the portion of the aerosol spray device are chosen so that these differences are met. Since the electrical charge provided in accordance with the Fox reference is derived solely by interaction between the liquid and the aerosol spray device, Fox does not anticipate these claims.

Rejection over Stopper U.S. Patent No. 4,536,323

Claims 1-13, 15 and 16 have been rejected as anticipated by Stopper U.S. Patent No. 4,536,323.

Claims 1-13, 15 and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Stopper 4,536,323, esp. column 4, line 34 – column 5, line 19, noting also column 3, line 55 – column 4, line 19. Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 1 herein.

This rejection is respectfully traversed, particularly in view of the foregoing amendment which incorporates the substance of claim 2 into claim 1.

The Stopper reference is concerned with compositions designed to suppress the flammability of aerosol propellants. Similarly to the Bassam reference discussed above, Stopper is not concerned with providing a unipolar electrostatic charge to the liquid droplets. Applicants' arguments concerning the Bassam reference are equally applicable to the Stopper reference. Applicants therefore submit that Stopper likewise cannot function as an anticipatory reference.

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Serial No. : 10/091,284
Filed : March 5, 2002
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Attorney's Docket No.: 08291-719001 / 10279P1

Conclusion

In view of the foregoing amendment and these remarks, it is believed that all claims remaining in this application are in condition for allowance. Favorable action is therefore requested.

Respectfully submitted,

Date: 8 March 04

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